

ABSTRACT OF THE DISCLOSURE

A method of forming a CMOS thin film transistor device.
A dry etching procedure is performed to remove part of a
photoresist layer and part of a metal layer and thus forms a
5 gate with a symmetrical cone shape and a remaining photoresist
layer. The dielectric layer is thus exposed in the lightly doped
area. Specially, the bottom width of the first gate is narrower
than that of the first metal layer and the symmetrical cone shape
is gradually thinner from bottom to top. Using the gate as a
10 mask, an n^- -ion implantation is performed to form a self-aligned
and symmetrical LDD region in a semiconductor layer without
additional photolithography steps.